

TITLE: MECHANICAL BLADDER PUMP

ABSTRACT OF THE DISCLOSURE

A mechanical bladder pump is provided for collecting fluid samples from a well. The pump includes an outer tubular member having a longitudinal bore, and an inner tubular member arranged within the bore of the outer tubular member. The inner and outer tubular members are connected at their lower ends to a compressible bladder, and are arranged for oscillating movement relative to each other to expand and compress the bladder. The lower end of the bladder is open to an inlet passage, and the upper end of the bladder is open to an outlet passage. First and second check valves are provided to control the flow of fluid through the bladder during operation of the pump. A return spring is used to store energy during a tension stroke of the inner tubular member and to release energy during a compression stroke thereof. The pump provides highly representative samples of groundwater.